

REMARKS

The following remarks are prepared in response to the Office Action of July 13, 2005. Claims 1-5, 11-14 and 21-26 remain pending in this application, after entry of this amendment. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection of Claims 1-14 and 21-26 Under 35 U.S.C. §§ 102(e) and 103(a)

Claims 1-3, 5-7, 8, 10-14 and 21-26 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Hostetler* (U.S. Patent No. 6,675,476, hereinafter *Hostetler*). Claims 4 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hostetler* in view of *Kawamura et al.* (U.S. Patent No. 6,543,884, hereinafter *Kawamura*). Applicant respectfully traverses.

Independent Claims 1, 3 and 5

Independent claims 1, 3 and 5 have been amended to recite a method of etching a substrate surface comprising depositing a metal layer over an entire top surface of the passivation material. Figure 7 shows a metal layer 56 deposited over the passivation layer 54 (paragraph 37). The metal layer 56 covers the area above the resistor (atop the passivation layer 54) to provide a barrier that prevents degradation of the resistor that would otherwise occur as a result of the cavitation effect that is attendant with the collapse of the vapor bubble after an ink drop has been fired from the ink chamber (paragraph 37). The metal layer 56 is also extended to cover the passivation layer 54 at the boundaries 50 of the trenches 32 as well as on the strip 46 (paragraph 37). This extension of the metal layer provides a protective cover over the passivation layer 54 at locations where that passivation layer serves as a hard mask (paragraph 37).

Hostetler discloses a tantalum layer 110 to define heating resistors for the printhead (col. 4, lns. 10-11 and figures 1-7). As shown in the figures, the tantalum layer 110 does not

cover an entire top surface of the passivation layer 108 but rather has gaps that expose the passivation layer 108. These gaps are important because they help form the heating resistors for the printhead. By contrast, the metal layer of the present invention provides a protective cover over the passivation layer 54 at locations where that passivation layer serves as a hard mask. Therefore, *Hostetler* does not teach or suggest depositing a metal layer over an entire top surface of the passivation material as recited in independent claims 1, 3 and 5. Furthermore, *Kawamura* does not teach or suggest depositing a metal layer over an entire top surface of the passivation material. For at least the reasons discussed above, Applicant submits that claims 1, 3 and 5 are patentably distinct over *Hostetler* and *Kawamura* and the rejections under 35 U.S.C. §§ 102(e) and 103(a) should be withdrawn.

Claims 6-10

Applicant has canceled claims 6-10 without prejudice. Applicant reserves the right to file a continuation application on these canceled claims.

Independent Claim 11

Independent claim 11 recites a method of fabricating multiple layers of a thermal inkjet printhead that includes a substrate and a trench for moving ink across the substrate, as well as drop generator components for ejecting drops of ink from the substrate, comprising the steps of providing on the substrate a layer to serve both as a drop generator component and as a mask to define the trench for etching. The drop generator component may be a transducer 16, a transistor 18 and/or a conductor 20 (paragraph 36, figure 8). In the Office Action, the Examiner fails to specifically identify a passage in *Hostetler* or *Kawamura* that discloses providing on the substrate a layer to serve both as a drop generator component and as a mask to define the trench for etching. Applicant asserts that *Hostetler* and *Kawamura*, solely or in combination, fail to teach or suggest providing on the substrate a layer to serve both as a drop generator component and as a mask to define the trench for etching. For at

least the reasons discussed above, Applicant submits that claim 11 is patentably distinct over *Hostetler* and *Kawamura* and the rejections under 35 U.S.C. §§ 102(e) and 103(a) should be withdrawn.

Independent Claim 23

Independent claim 23 has been amended to recite a method of etching a substrate surface comprising fabricating, on a substrate, a drop generator component that provides for controlled expulsion of liquid. The drop generator component may be a transducer 16, a transistor 18 and/or a conductor 20 (paragraph 36, figure 8). In the Office Action, the Examiner fails to specifically identify a passage in *Hostetler* or *Kawamura* that discloses fabricating, on a substrate, a drop generator component that provides for controlled expulsion of liquid. Applicant asserts that *Hostetler* and *Kawamura*, solely or in combination, fail to teach or suggest fabricating, on a substrate, a drop generator component that provides for controlled expulsion of liquid. For at least the reasons discussed above, Applicant submits that claim 23 is patentably distinct over *Hostetler* and *Kawamura* and the rejections under 35 U.S.C. §§ 102(e) and 103(a) should be withdrawn.

Dependent Claims 2, 4, 12-14, 21, 22 and 24-26

Claims 2, 4, 12-14, 21, 22 and 24-26 depend from independent claims 1, 11 and 23, adding structural features that more particularly define the invention and further distinguish over the cited references and the prior art of record. For these reasons, and for the reasons set forth above for independent claims 1, 11 and 23, the rejections of these dependent claims under 35 U.S.C. § 103(a) is improper and should be withdrawn.

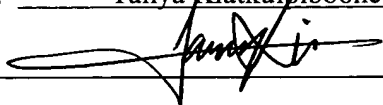
CONCLUSION

In view of the amendments and remarks above, it is respectfully submitted that all the pending claims are in condition for allowance, and such action is earnestly solicited.

If the Examiner believes an interview would be helpful to advance this case, she is invited to contact the undersigned attorney.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 13, 2005.

By: Tanya Kiatkulpiroone

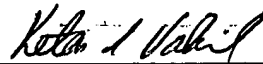


Signature

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Very truly yours,

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